

What is claimed is:

1. A data processing system of organizing, retrieving, and displaying data within a computer system to enable repeated viewing of different, user-selected subsets of elements, comprising:

5 a. a database and associated software for storing, organizing, and retrieving data about elements and their attributes;

b. a display for displaying a visual representation of selected subset elements for comparison, with:

1. each of the different, user-selected subsets given its own symbol or common image format; and

10 2. each element's symbol or image given a slot on the display; this slot may be:

i. designated by x, y, and z locations representing its real or symbolic relationship to other elements; or

ii. within a grid; and

15 c. control apparatus for showing and hiding subsets on the visual representation which include:

1. display control panel(s) with graphic and text-list selectors that, in response to user events or automatic updating systems, call to the database to determine subset elements to be added and subtracted from the visual representation;

20 2. alternatives to scroll bars which enable graphic and text-list selectors to be displayed in discrete, layered blocks, any one of which may be called forward by clicking, or otherwise signaling, on a segmented bar, arrowhead, or other symbol.

2. The system of claim 1 wherein said elements relate to an interactive two-, three-, or four-dimensional map or diagram of a place, topic, or thing.

3. The system of claim 1 wherein said selected elements comprise information forming a computer or online alternative to reference documents, including

atlases, encyclopedias, text books, natural history guides, travel guidebook listings, yellow pages directories, product catalogues, machine manuals, and land-use planning reports.

4. The system of claim 1 wherein said selected elements comprise information forming a computer or online specialty store where consumers can ask to see and compare all the available offerings for a particular category of product from one or a multitude of manufacturers and distributors.

5. In combination in a program-controlled data-processing system for controlling an infrastructure for presenting a collection of user selected information elements to facilitate translation of complex topical data to an enhanced display format, comprising:

5 a. Display control panels for receiving user commands and implementing a selective layering of data in the form of graphics, text and/or images onto a base presentation wherein said control panel includes control icons and text lists for manipulating the content of said selective layers in accord with user defined objectives;

10 b. Database comprising one or more data elements for use in providing the substance to said layered data wherein said data elements are located in addressable memory in said database;

c. Central display controller in communication with said database and said control panel for interpreting commands received by said control panel and directing the placement of data elements in accordance with a pre-programmed hierarchy; and

15 d. Display, interconnected to said central display controller for receiving image data including a base image and one or more selected layers for visual perception by said user.

6. The system of claim 5 wherein database further comprises database elements for supporting slotted map data for incorporation into said image data on said display.

7. The system of claim 5 wherein said display is a two-dimensional matrix of pixel elements characterizing said data elements.

8. In combination in a display management system for displaying complex data elements relating to subjects wherein said data elements include three-dimensional graphics and/or images comprising:

5 a. first database having a plurality of data elements on a subject and its graphic information, said elements are stored in volatile memory and said first database capable of being refreshed with current data from a second database;

b. A display processor characterized by a controlling program that provides one or more users with control icons on said display for selectively recalling collections of data; said icons further arranged in hideable panels;

10 c. Communication means for linking said first database with said second database to provide for refreshed data elements therefrom; and

d. Display for providing a multi-dimensional presentation of selected data element layers in accordance with user commands and said program controlling logic.

9. The system of claim 8 wherein said communication means is a public access network.

10. The system of claim 8 wherein said control icons are further characterized by descriptive text that is selectively displayed to enhance navigation and information display.